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EQUALITY OF EDUCATIONAL OPPORTUNITY (IN THE NORTH), A REVIEW OF SOME PERTINENT DATA.

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TWELFTH- AND SIXTH-GRADE DATA FROM A STUDY BY JAMES S. COLEMAN WERE USED TO ANSWER QUESTIONS ABOUT THE EQUALITY OF EDUCATION IN THE NORTH. THE MORE IMPORTANT QUESTIONS POSED WERE--(1) IS THERE AN INSTRUCTIONAL COST DIFFERENTIAL DUE TO RACE, (2) WHAT IS THE PROPORTION OF WHITES IN CLASSES COMPOSED OF BOTH NEGROES AND WHITES, AND (3) ARE THERE REAL DIFFERENCES BETWEEN WHITE AND NEGRO ACHIEVEMENT. THE STUDY SHOWED THAT- (1) MONEY SPENT FOR THE PRIMARY AND SECONDARY EDUCATION OF NEGRO CHILDREN WAS GREATER THAN FOR WHITE CHILDREN, (2) THE RANGE OF EXPENDITURES ON WHITES WAS GREATER THAN FOR NEGROES, (3) NEGROES WERE MORE SEGREGATED IN ELEMENTARY SCHOOLS THAN IN SECONDARY, (4) BOTH NEGROES AND WHITES TENDED TO DO BETTER IN CLASSES WITH A HIGHER PROPORTION OF WHITE STUDENTS, (5) NONVERBAL, VERBAL, READING, MATHEMATICS, SELF-CONCEPT, AND CONTROL OF ENVIRONMENT VARIABLES WERE HIGHLY CORRELATED WITH ACHIEVEMENT, (6) NEGROES WERE BEHIND WHITES IN EDUCATION DESPITE THE FACT THAT THE UPPER ABILITY LEVELS OF THE TWO GROUPS WERE SIMILAR, AND (7) SCHOOL HAD A GREATER EFFECT ON YOUNGER CHILDREN THAN ON OLDER. THE ESTABLISHMENT OF PRESCHOOLS, BUSING, AND TRACKING WAS RECOMMENDED. (HW)

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EQUALITY OF EDUCATIONAL OPPORTUNITY
(In the North)

A Review of Some Pertinent Data
- Hugh M. Davison, September 27, 1966 -
Penn State Univ

The federal study[1] with data on several hundred thousand children in ethnic and regional groupings is perhaps our best source of information about American schools. The study uses measures of: pupil ability and performances; student background; school environment; and administration. This brief review using the Twelfth and Sixth grade data of the study will attempt to answer these questions based on Northern schools for Negroes and Whites.

1. Is there a cost of instruction differential due to race and, further, does it affect learning?
2. What are the proportions of Whites in classes for both Negroes and Whites, and does it affect learning?
3. Of the many measures used, which have relationship to achievement?
4. Are the differences in achievement, Negro versus White, real?
5. What future changes are suggested for public education?

Instruction Costs

Grade 12 North	Mean	Std. Dev.
Negroes	$492.32	$135.76
Correlation with General Information Test Results	r=.004	
Whites	$483.53	$173.10
Correlation with General Information Test Results	r=.062	

Grade 6 North	Mean	Std. Dev.
Negroes	$484.72	$111.02
Correlation with Reading Achievement	r=.045	
Whites	$492.61	$174.63
Correlation with Reading Achievement	r=.039	

The average Negro has more spent on him per year for secondary education ($9) and less for elementary education ($8) than the expenditure for average White. The data tell more: the range of expenditures on Whites is greater going both lower and higher than that for Negroes. All correlations of cost with test results are unimportant. The best measures of achievement were used after studying the correlation matricies.

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1. James S. Coleman, Et. Al., Equality of Educational Opportunity U.S.H.E.W., O.E., July 2, 1966. Superintendent of Documents No. FS 5.238:38001 737 pages and Supplement 548 pages.

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Results #2.

The proportions of Whites in the classes of Whites are higher than the proportions of Whites in classes for Negroes, as the data below indicate.

Proportion of Whites in Classes

Grade 12 North			Grade 6 North		
Negroes	Mean	Std. Dev.	Negroes	Mean	Std. Dev.
	.413	.349		.243	.303
Correlation with General Information Test Results	r=.174		Correlation with Reading Achievement	r=.068	
Whites			Whites		
	.899	.122		.877	.143
Correlation with General Information Test Results	r=.074		Correlation with Reading Achievement	r=.118	

The average Negro is most segregated in elementary school where 24% of the classes are White members. In high school the proportion rises to 41%. The average White pupil is in classes predominantly White, 90% or 88%. The range of White proportion is greatest in classes containing Negroes. The correlation of .174 is significant for such a large sample, however, it is accounting for about 3% of the test data. Negroes tend to do better in classes of a higher proportion of Whites. The Whites also tend to do better in classes predominately White. This situation might easily be accounted for, by the fact that brighter Negroes and Whites are found in the largely White classrooms. Further, it looks as if segregation was more of a fact at the elementary level than at the secondary level.

Results #3.

The correlation tables of the major study were reviewed to see what variables were correlated more than .25 with the achievement measure selected in each case. The Negro North data were reviewed first and then similar data were gathered for the White groups.

More influencing variables were found in grade 12 than in grade 6. It is surprising the scarcity of important variables when the total matrix is considered. Correlations with such a large sample are quite conclusive, very stable. It is naturally expected that mental tests would correlate with mental tests. However, the personality measures (self concept and control of environment) are interesting and reliabily related as are the whole school measures, verbal means and non-verbal means, which affect the work done by groups of pupils. This latter is a socio-economic effect. The similarity of results, Negroes as compared to Whites is striking. These independent samples have the same general correlation patterns among measures, but the performance level is lower for Negroes.

With General Information Considered as Best Measure of Achievement, No. 55, for 12th Grades North, what is Correlated with it?

Title of Measure	Variable No.	r's for Negroes	r's for Whites
Non-Verbal	1.	.530	.491
Verbal	2.	.767	.765
Reading	42.	.666	.641
Mathematics	43.	.450	.577
Self Concept	46.	.263	.412
Control of Environment	49.	.276	.291
Non-Verbal Mean	50.	.264	.199
Verbal Mean	51.	.280	.225

Self Concept=self placement as a learner
Control of Environment=reverse of defeatism
Non-Verbal Mean is a school attended characteristic
Verbal Mean is a school attended characteristic

With Reading (For Sixth Graders In North) Considered as Best Measure of Achievement, No. 42, what is Correlated with it?

Title of Measure	Variable No.	r's for Negro Groups	r's for White Groups
Non-Verbal	1.	. .491	.484
Verbal	2.	.734	.739
Mathematics	43.	.640	.673
Control of Environment	49.	.269	.323

COLEMAN STUDY RESULTS[a]

Correlations, Ability and Performance
Negroes in Northern U.S., Grade 12

Abilities	Variable #	2	42	43	55	Mean	Standard Deviation
Non-Verbal	1	.529	.523	.388	.530	30.2	8.3
Verbal	2		.771	.426	.767	52.7	14.5
Performance							
Reading	42			.405	.666	61.6	17.2
Mathematics	43				.450	39.2	19.0
General Information	55					42.4	11.7

Correlations, Ability and Performance
Whites in Northern U.S., Grade 12

Abilities	Variable #	2	42	43	55	Mean	Standard Deviation
Non Verbal	1	.479	.484	.521	.491	37.6	6.8
Verbal	2		.763	.563	.765	67.6	14.1
Performance							
Reading	42			.515	.641	76.1	16.8
Mathematics	45				.577	57.6	17.1
General Information	55					56.2	12.4

(a) James S. Coleman Et Al, Equality of Educational Opportunity U.S.D.H.E.W., O.E., July 2, 1966, Superintendent of Documents No. FS 5.238:38001. 737 pages and Supplement, 548 pages.

COLEMAN STUDY RESULTS[a]

Correlations of Ability and Performance
Negroes in Northern U.S., Grade 6

Abilities	Variable #	2	42	43	Mean	Standard Deviation
Non-Verbal	1	.493	.491	.479	31.1	9.3
Verbal	2		.734	.627	24.2	9.1
Performance						
Reading	42			.640	31.2	13.5
Mathematics	43				22.0	9.9

Correlations of Ability and Performance
Whites in Northern U.S., Grade 6

Abilities	Variable #	2	42	43	Mean	Standard Deviation
Non-Verbal	1	.457	.484	.493	38.5	7.4
Verbal	2		.739	.655	36.1	11.4
Performance						
Reading	42			.673	43.9	15.8
Mathematics	43				34.1	11.5

(a) James S. Coleman Et Al, Equality of Educational Opportunity U.S.D.H.E.W., O.E., July 2, 1966. Superintendent of Documents No. 5.238:38001, 737 pages and Supplement 548 pages.

The achievement results for both Whites and Negroes show the important relationship of verbal and non-verbal ability to performance. Accurate appraisal of his own potential by the individual, as well as a personal attitude against defeatism, are important and perhaps the schools could work harder on these aspects. The schools can't make high level communities so as a measure, this holds little promise.

The gross difficulity with such a study as the federal one and the earlier "Project Talent" is that teaching performance is neglected. It may be that it is covered in part by the school means, however, previous experiences and subsequent study might show that teaching performance was independent of pupil ability and an additive element in prediction achievement. A general impression might be: Let's pay more attention to teaching and less to problems of segregation.

Results #4

Difference in Mean Scores

Northern Whites Minus Northern Negroes

	Sixth Grade		Twelfth Grade	
Abilities	Differences	Standard Deviationq of Total Est.	Differences	Standard Deviation of Total Est.
Non-Verbal	7.4	9.0	7.4	7.9
Verbal	11.9	10.0	14.9	14.3
Performances				
Reading	12.7	14.5	14.5	16.8
Mathematics	12.1	10.5	18.4	17.7

From the above it can be concluded that the Northern Negroes, grade 6 and 12, are about a Standard Deviation behind the Whites in these measures.

Many arguments and excuses can be made about the above data. The parallelism of grade 6 results with grade 12 is amazing. It means that although the upper ability levels of the Negroes are competing successfully with the average to upper Whites, the great Negro group is seriously behind in education. Even though cultural errors in testing may exist, the hard fact of difference is present.

Results #5

Considering all the data and the case studies of the report, the solution for the North is not readily indicated. To assist in judgement the grade one data are presented.

Grade One Abilities, North

		Negroes		Whites	
Measure	Variable Number	Mean	Standard Deviation	Mean	Standard Dev.
Non-Verbal	1	20.16	8.97	27.90	7.25
Verbal	2	17.58	3.66	20.30	2.80

Here the races are closer together on the verbal measure. The difference in non-verbal is about the same as for older children. This looks as if school has more effect on these young children than at later ages. The other conclusion is possible, that school has had less chance to socially or mentally segregate from the verbal point of view. Looking at the data as a teacher, I would work hard on experience and relationships to encourage non-verbal growth. Also I would emphasize success in verbal tasks so as to not lose this better status.

As an administrator, I would favor pre-school, bussing, and tracking, but the big element seems to be successful teaching.